MULTIMEDIA AND SCENT STORAGE CARTRIDGE DESIGN HAVING ELECTROSTATIC SCENT RELEASE AND METHODS FOR USING SAME

COMPLETE LIST OF CLAIMS

1. **(Original) (Withdrawn)** A scent- and multimedia-bearing card for use with a separate scent release and multimedia playback system, the scent- and multimedia-bearing card comprising:

a scent storage medium for storing at least one scent;

an encapsulated multimedia storage medium for storing multimedia information; and

scent release and multimedia playback control information for use by the scent release and multimedia playback system in coordinating scent release and multimedia playback from the scent- and multimedia-bearing card.

2. **(Currently Amended)** A scent- and multimedia-bearing card for use with a separate scent release and multimedia playback system, the scent- and multimedia-bearing card comprising:

a scent storage medium for storing at least one scent; and

an encapsulated multimedia storage medium for storing multimedia information.

~~and~~

~~scent release and multimedia playback control information for use by the scent release and multimedia playback system in coordinating scent release and multimedia playback from the scent- and multimedia-bearing card.~~

3. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the encapsulated multimedia storage medium comprises a Type II DVD-RAM-

like cassette device, the Type II DVD-RAM-like cassette device having a housing structure encapsulating a removable DVD-RAM or DVD disc.

4. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores a plurality of scents.

5. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores at least one fragrance.

6. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores at least one aroma.

7. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores at least one flavor.

8. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores at least one air-borne therapeutic agent.

9. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium stores at least one air-borne medicine.

10. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 1 wherein the scent storage medium comprises:

a housing;

a scent storage reservoir contained in the housing; and

a scent release unit connected to the scent storage reservoir for releasing scent from the scent- and multimedia-bearing card.

11. **(New)** The scent- and multimedia-bearing card of claim 2 wherein the scent storage medium comprises:

a housing;

a scent storage reservoir contained in the housing; and

a scent release unit connected to the scent storage reservoir for releasing scent from the scent- and multimedia-bearing card.

12. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 10 wherein the scent release unit comprises:

a scent release chamber for containing scent just prior to release; and

a tube connecting the scent reservoir to the scent chamber.

13. **(New)** The scent- and multimedia-bearing card of claim 11 wherein the scent release unit comprises:

a scent release chamber for containing scent just prior to release; and

a tube connecting the scent reservoir to the scent chamber.

14. **(Original)** The scent- and multimedia-bearing card of claim 12 wherein the scent release chamber comprises a three-dimensional region enclosed on all sides except having a scent release opening facing upwards for releasing scent from the scent release chamber, and wherein the scent release unit further comprises:

a cover for covering the scent release opening, wherein the cover is moveable between at least two positions, a first position wherein the scent release opening is substantially sealed thereby preventing scent from escaping from the scent release chamber, and a second position, wherein the cover is displaced from the opening in the scent release chamber, wherein the displacement of the cover permits scent to escape from the scent release chamber during scent release operations.

15. **(Previously Presented)** The scent- and multimedia-bearing card of claim 13 wherein the scent release chamber comprises a three-dimensional region enclosed on all

sides except having a scent release opening facing upwards for releasing scent from the scent release chamber, and wherein the scent release unit further comprises:

a cover for covering the scent release opening, wherein the cover is moveable between at least two positions, a first position wherein the scent release opening is substantially sealed thereby preventing scent from escaping from the scent release chamber, and a second position, wherein the cover is displaced from the opening in the scent release chamber, wherein the displacement of the cover permits scent to escape from the scent release chamber during scent release operations.

16. **(Original)** The scent- and multimedia-bearing card of claim 14 wherein the cover is made from electromagnetic material and wherein the scent release unit further comprises:

an electromagnet for moving the cover from the first position to the second position; and

electromagnet control means for controlling the operation of the electromagnet.

17. **(Currently Amended)** The scent- and multimedia-bearing card of claim 15 wherein the cover is made from electromagnetic material and wherein the scent release unit further comprises:

an electromagnetic mechanism means for moving the cover from the first position to the second position; and

electromagnetic control means for controlling the operation of the electromagnetic mechanism means.

18. **(Original)** The scent- and multimedia-bearing card of claim 16 wherein the electromagnet control means further comprises:

wiring for receiving control signals from the scent release and multimedia playback system, the control signals controlling the operation of the electromagnet.

19. **(Currently Amended)** The scent- and multimedia-bearing card of claim 17 wherein the electromagnetic control means further comprises:

wiring for receiving control signals from the scent release and multimedia playback system, the control signals controlling the operation of the electromagnetic mechanism means.

20. **(Original)** The scent- and multimedia-bearing card of claim 16 further comprising:

a spring connecting the cover to the scent release unit, wherein the spring maintains the cover in the first, closed position until the electromagnet is energized, when the cover moves to the open, second position, and wherein the spring returns the cover to the closed position after the electromagnet is de-energized.

21. **(Currently Amended)** The scent- and multimedia-bearing card of claim 17 further comprising:

a spring connecting the cover to the scent release unit, wherein the spring maintains the cover in the first, closed position until the electromagnetic mechanism means is energized, when the cover moves to the open, second position, and wherein the spring returns the cover to the closed position after the electromagnetic mechanism means is de-energized.

22. **(Original)** The scent- and multimedia-bearing card of claim 20 wherein the spring comprises a spiral spring.

23. **(Previously Presented)** The scent- and multimedia-bearing card of claim 21 wherein the spring comprises a spiral spring.

24. **(Original)** The scent- and multimedia-bearing card of claim 16 wherein the scent release unit further comprises:

a hinge connecting the cover to the scent release unit, whereby the cover can rotate about the hinge while opening and closing; and

a leaf spring cooperating with the hinge to return the cover to a closed position when the electromagnet is not energized.

25. **(Currently Amended)** The scent- and multimedia-bearing card of claim 17 wherein the scent release unit further comprises:

a hinge connecting the cover to the scent release unit, whereby the cover can rotate about the hinge while opening and closing; and

a leaf spring cooperating with the hinge to return the cover to a closed position when the electromagnetic mechanism means is not energized.

26. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 12 wherein the scent release unit further comprises an absorbent material positioned within the scent release chamber for momentarily retaining scent to be released from the scent- and multimedia-bearing card.

27. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 10 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

28. **(New)** The scent- and multimedia-bearing card of claim 11 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

29. **(Original)** The scent- and multimedia-bearing card of claim 27 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

30. **(Previously Presented)** The scent- and multimedia-bearing card of claim 28 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

31. **(Original)** The scent- and multimedia-bearing card of claim 29 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process.

32. **(Currently Amended)** The scent- and multimedia-bearing card of claim 30 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process; and

wiring for connecting the grid to a ground or an external voltage source with a opposite charge to the corona discharge pin.

33. **(New)** The grid opposite from the corona discharge pin of claim 32 wherein the opposite charged grid further neutralize the ionized scent molecules to assist in the scent release process.

34. **(New)** The scent-bearing card of claim 30 wherein the electrostatic scent release apparatus further comprises:

a shield surround the corona discharge pin for focusing ionized scent molecules to assist in the scent release process; and

wiring for connecting the shield to a ground or an external voltage source with a same charge as the corona discharge pin.

35. **(New)** The corona discharge pin for creating corona discharge to ionize scent of claim 30 wherein the discharge pin is constructed with needle or capillary tube.

36. **(New)** The corona discharge needle or capillary tube of claim 35 wherein the discharge needle or capillary tube is made by conductive materials.

37. **(New)** The corona discharge needle or capillary tube of claim 35 wherein the discharge needle or capillary tube is made by nonconductive materials.

38. **(Original)** The scent- and multimedia-bearing card of claim 16 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

39. **(Previously Presented)** The scent- and multimedia-bearing card of claim 17 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

40. **(Original)** The scent- and multimedia-bearing card of claim 38 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

41. **(Previously Presented)** The scent- and multimedia-bearing card of claim 39 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

42. **(Original)** The scent- and multimedia-bearing card of claim 40 wherein the cover and electromagnet are coated in epoxy, wherein the epoxy protects the cover and electromagnet during corona discharge.

43. **(Currently Amended)** The scent- and multimedia-bearing card of claim 41 wherein the cover and electromagnetic mechanism means are coated in epoxy or high voltage insulation materials, wherein the epoxy or high voltage insulation materials protects the cover and electromagnetic mechanism means during corona discharge.

44. **(Original)** The scent- and multimedia-bearing card of claim 40 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process.

45. **(Currently Amended)** The scent- and multimedia-bearing card of claim 41 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process; and

wiring for connecting the grid to a ground or an external voltage source with a opposite charge to the corona discharge pin.

46. **(New)** The grid opposite from the corona discharge pin of claim 45 wherein the opposite charged grid further neutralize the ionized scent molecules to assist in the scent release process.

47. **(New)** The scent-bearing card of claim 41 wherein the electrostatic scent release apparatus further comprises:

a shield surround the corona discharge pin for focusing ionized scent molecules to assist in the scent release process; and

wiring for connecting the shield to a ground or an external voltage source with a same charge as the corona discharge pin.

48. **(New)** The corona discharge pin for creating corona discharge to ionize scent of claim 41 wherein the discharge pin is constructed with needle or capillary tube.

49. **(New)** The corona discharge needle or capillary tube of claim 48 wherein the discharge needle or capillary tube is made by conductive materials.

50. **(New)** The corona discharge needle or capillary tube of claim 48 wherein the discharge needle or capillary tube is made by nonconductive materials.

51. **(New)** A scent-bearing card for use with a separate scent release and multimedia playback system to create an immersive multimedia experience comprised of olfactory and visual or sound elements, the scent-bearing card comprising:

a scent storage medium for storing at least one scent; and

scent release control information for use by the scent release and multimedia playback system in controlling scent release from the scent-bearing card.

52. **(Original) (Withdrawn)** A scent-bearing card for use with encapsulated optical multimedia storage devices of the type wherein an optical disc is contained in a storage

housing, the scent-bearing card and encapsulated optical multimedia storage devices for use with a separate scent release and multimedia playback system to create an immersive multimedia experience comprised of olfactory and visual or sound elements, the scent-bearing card comprising:

a scent storage medium for storing at least one scent; and

scent release control information for use by the scent release and multimedia playback system in controlling scent release from the scent-bearing card.

53. **(Original) (Withdrawn)** The scent- and multimedia-bearing card of claim 52 wherein the encapsulated multimedia storage optical multimedia storage device comprises a Type II DVD-RAM-like cassette device, the Type II DVD-RAM-like cassette device having a housing structure encapsulating a removable DVD-RAM or DVD disc.

54. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium stores a plurality of scents.

55. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium stores at least one fragrance.

56. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium stores at least one aroma.

57. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium stores at least one flavor.

58. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium stores at least one air-borne therapeutic agent.

59. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent

storage medium stores at least one air-borne medicine.

60. **(Original) (Withdrawn)** The scent-bearing card of claim 52 wherein the scent storage medium comprises:

a housing;

a scent storage reservoir contained in the housing; and

a scent release unit connected to the scent storage reservoir for releasing scent from the scent-bearing card.

61. **(Previously Presented)** The scent-bearing card of claim 51 wherein the scent storage medium comprises:

a housing;

a scent storage reservoir contained in the housing; and

a scent release unit connected to the scent storage reservoir for releasing scent from the scent-bearing card.

62. **(Original) (Withdrawn)** The scent-bearing card of claim 60 wherein the scent release unit comprises:

a scent release chamber for containing scent just prior to release; and

a tube connecting the scent reservoir to the scent release chamber.

63. **(Previously Presented)** The scent-bearing card of claim 61 wherein the scent release unit comprises:

a scent release chamber for containing scent just prior to release; and

a tube connecting the scent reservoir to the scent release chamber.

64. **(Original)** The scent-bearing card of claim 62 wherein the scent release chamber comprises a three dimensional region enclosed on all sides except having a scent release

opening facing upwards for releasing scent from the scent release chamber, and wherein the scent release unit further comprises:

a cover for covering the scent release opening, wherein the cover is moveable between at least two positions, a first position wherein the scent release opening is substantially sealed thereby preventing scent from escaping from the scent release chamber, and a second position, wherein the cover is displaced from the opening in the scent release chamber, wherein the displacement of the cover permits scent to escape from the scent release chamber during scent release operations.

65. **(Previously Presented)** The scent-bearing card of claim 63 wherein the scent release chamber comprises a three dimensional region enclosed on all sides except having a scent release opening facing upwards for releasing scent from the scent release chamber, and wherein the scent release unit further comprises:

a cover for covering the scent release opening, wherein the cover is moveable between at least two positions, a first position wherein the scent release opening is substantially sealed thereby preventing scent from escaping from the scent release chamber, and a second position, wherein the cover is displaced from the opening in the scent release chamber, wherein the displacement of the cover permits scent to escape from the scent release chamber during scent release operations.

66. **(Original)** The scent-bearing card of claim 64 wherein the cover is made from electromagnetic material and wherein the scent release unit further comprises:

an electromagnet for moving the cover from the first position to the second position; and

electromagnet control means for controlling the operation of the electromagnet.

67. **(Currently Amended)** The scent-bearing card of claim 65 wherein the cover is made from electromagnetic material and wherein the scent release unit further comprises:

an electromagnetic mechanism means for moving the cover from the first position to the second position; and

electromagnetic control means for controlling the operation of the electromagnetic mechanism means.

68. **(Original)** The scent-bearing card of claim 66 wherein the electromagnet control means further comprises:

wiring for receiving control signals from the scent release and multimedia playback system, the control signals controlling the operation of the electromagnet.

69. **(Currently Amended)** The scent-bearing card of claim 67 wherein the electromagnetic control means further comprises:

wiring for receiving control signals from the scent release and multimedia playback system, the control signals controlling the operation of the electromagnetic mechanism means.

70. **(Original)** The scent-bearing card of claim 66 further comprising:

a spring connecting the cover to the scent release unit, wherein the spring maintains the cover in the first, closed position until the electromagnet is energized, when the cover moves to the open, second position, and wherein the spring returns the cover to the closed position after the electromagnet is de-energized.

71. **(Currently Amended)** The scent-bearing card of claim 67 further comprising:

a spring connecting the cover to the scent release unit, wherein the spring maintains the cover in the first, closed position until the electromagnetic mechanism

means is energized, when the cover moves to the open, second position, and wherein the spring returns the cover to the closed position after the electromagnetic mechanism means is de-energized.

72. **(Original)** The scent-bearing card of claim 70 wherein the spring comprises a spiral spring.

73. **(Previously Presented)** The scent-bearing card of claim 71 wherein the spring comprises a spiral spring.

74. **(Original)** The scent-bearing card of claim 66 wherein the scent release unit further comprises:

a hinge connecting the cover to the scent release unit, whereby the cover can rotate about the hinge while opening and closing; and

a leaf spring cooperating with the hinge to return the cover to a closed position when the electromagnet is not energized.

75. **(Currently Amended)** The scent-bearing card of claim 67 wherein the scent release unit further comprises:

a hinge connecting the cover to the scent release unit, whereby the cover can rotate about the hinge while opening and closing; and

a leaf spring cooperating with the hinge to return the cover to a closed position when the electromagnetic mechanism means is not energized.

76. **(Original) (Withdrawn)** The scent-bearing card of claim 60 wherein the scent release unit further comprises an absorbent material positioned within the scent release chamber for momentarily retaining scent to be released from the scent-bearing card.

77. **(Original) (Withdrawn)** The scent-bearing card of claim 60 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

78. **(Previously Presented)** The scent-bearing card of claim 61 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

79. **(Original)** The scent-bearing card of claim 77 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

80. **(Previously Presented)** The scent-bearing card of claim 78 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

81. **(Original)** The scent-bearing card of claim 79 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process.

82. **(Currently Amended)** The scent-bearing card of claim 80 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process; and

wiring for connecting the grid to a ground or an external voltage source with a opposite charge to the corona discharge pin.

83. **(New)** The grid opposite from the corona discharge pin of claim 82 wherein the opposite charged grid further neutralize the ionized scent molecules to assist in the scent release process.

84. **(New)** The scent-bearing card of claim 80 wherein the electrostatic scent release apparatus further comprises:

a shield surround the corona discharge pin for focusing ionized scent molecules to assist in the scent release process; and

wiring for connecting the shield to a ground or an external voltage source with a same charge as the corona discharge pin.

85. **(New)** The corona discharge pin for creating corona discharge to ionize scent of claim 80 wherein the discharge pin is constructed with needle or capillary tube.

86. **(New)** The corona discharge needle or capillary tube of claim 85 wherein the discharge needle or capillary tube is made by conductive materials.

87. **(New)** The corona discharge needle or capillary tube of claim 85 wherein the discharge needle or capillary tube is made by nonconductive materials.

88. **(Original)** The scent-bearing card of claim 66 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

89. **(Previously Presented)** The scent-bearing card of claim 67 wherein the scent release unit further comprises:

electrostatic scent release apparatus for ionizing scent in the scent release unit.

90. **(Original)** The scent-bearing card of claim 88 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

91. **(Previously Presented)** The scent-bearing card of claim 89 wherein the electrostatic scent release apparatus further comprises:

corona discharge pin for creating corona discharge to ionize scent; and

wiring for connecting the corona discharge pin to an external voltage source.

92. **(Original)** The scent-bearing card of claim 90 wherein the cover and electromagnet are coated in epoxy, wherein the epoxy protects the cover and electromagnet during corona discharge.

93. **(Currently Amended)** The scent-bearing card of claim 91 wherein the cover and electromagnetic mechanism means are coated in epoxy or high voltage insulation materials, wherein the epoxy or high voltage insulation materials protects the cover and electromagnetic mechanism means during corona discharge.

94. **(Original)** The scent-bearing card of claim 92 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process.

95. **(Currently Amended)** The scent-bearing card of claim 91 wherein the electrostatic scent release apparatus further comprises:

a grid opposite from the corona discharge pin for attracting ionized scent molecules to assist in the scent release process; and

wiring for connecting the grid to a ground or an external voltage source with a opposite charge to the corona discharge pin.

96. **(New)** The grid opposite from the corona discharge pin of claim 95 wherein the opposite charged grid further neutralize the ionized scent molecules to assist in the scent release process.

97. **(New)** The scent-bearing card of claim 91 wherein the electrostatic scent release apparatus further comprises:

a shield surround the corona discharge pin for focusing ionized scent molecules to assist in the scent release process; and

wiring for connecting the shield to a ground or an external voltage source with a same charge as the corona discharge pin.

98. **(New)** The corona discharge pin for creating corona discharge to ionize scent of claim 91 wherein the discharge pin is constructed with needle or capillary tube.

99. **(New)** The corona discharge needle or capillary tube of claim 98 wherein the discharge needle or capillary tube is made by conductive materials.

100. **(New)** The corona discharge needle or capillary tube of claim 98 wherein the discharge needle or capillary tube is made by nonconductive materials.